HEALTH BRIEF

Injuries among Massachusetts Residents Ages 65 Years and Over

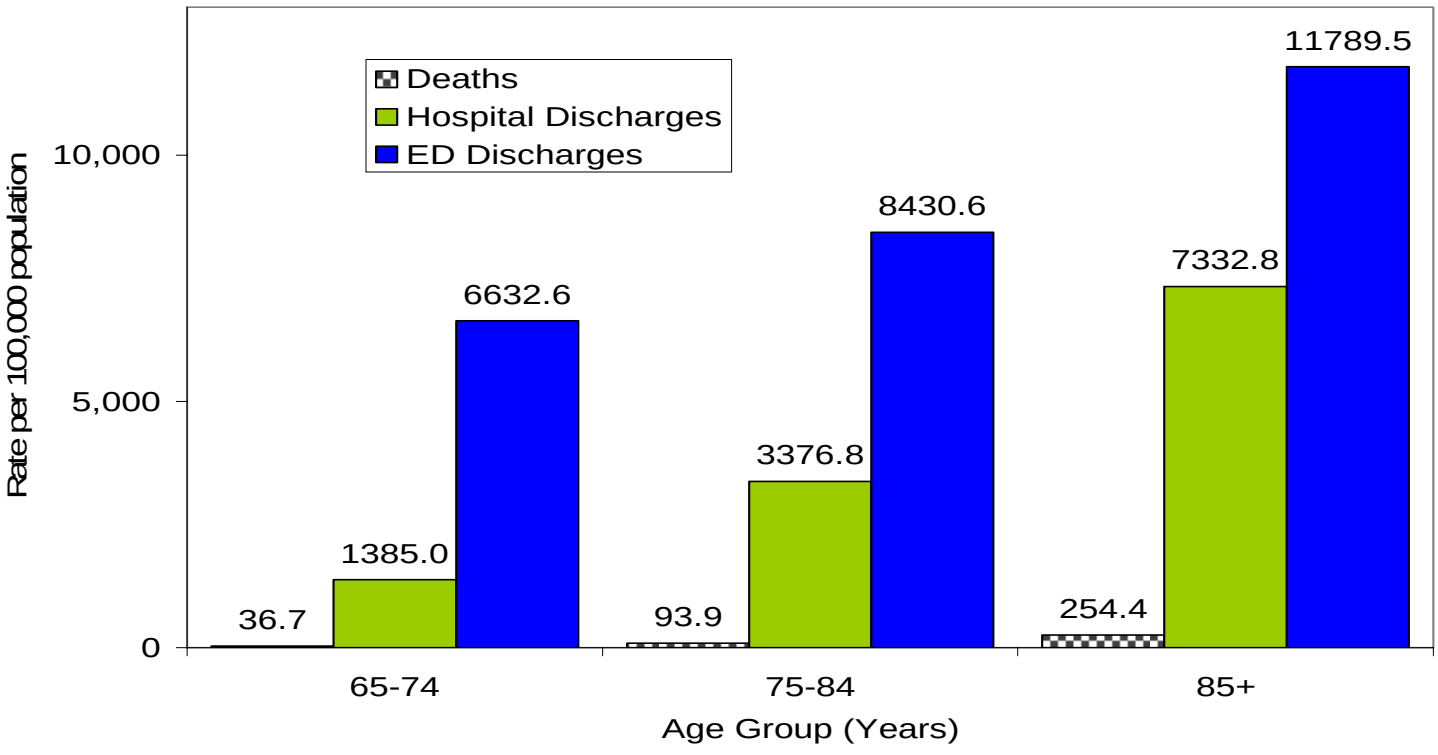
Prepared By: The Center for Community Health, Massachusetts Department of Public Health **September 2005**

Individuals ages 65 years and over are at a higher risk for injury-related fatalities and hospitalizations compared with the total population. In 2003, in MA, they comprised 13% of the population yet 29% of the injury fatalities and 48% of the injury-related hospitalizations in the entire population. Physical changes such as loss of muscle tone, unsteady balance, visual impairment as well as certain prescriptions can put seniors at higher risk for an injury. This health brief describes the burden of injury among residents ages 65 years and older and describes strategies for prevention.

Overall Injury Data among MA Residents Ages 65+, 2003:

- 777 injury fatalities
- 25,876 non-fatal injury-related acute care hospitalizations
- 69,212 non-fatal injury-related emergency department (ED) discharges
- The risk for an injury event rises exponentially with age
- In 2003, injury death rates among residents ages 85 years and older and over were 2.6 times higher than residents ages 75-84 years and nearly 7 times higher than residents ages 65-74 years (Figure 1)

Figure 1. Injury-related Death, Hospitalization and Emergency Department (ED) Discharge Rates, MA Residents Ages 65+ by Age Group, 2003



Sources: See method notes.

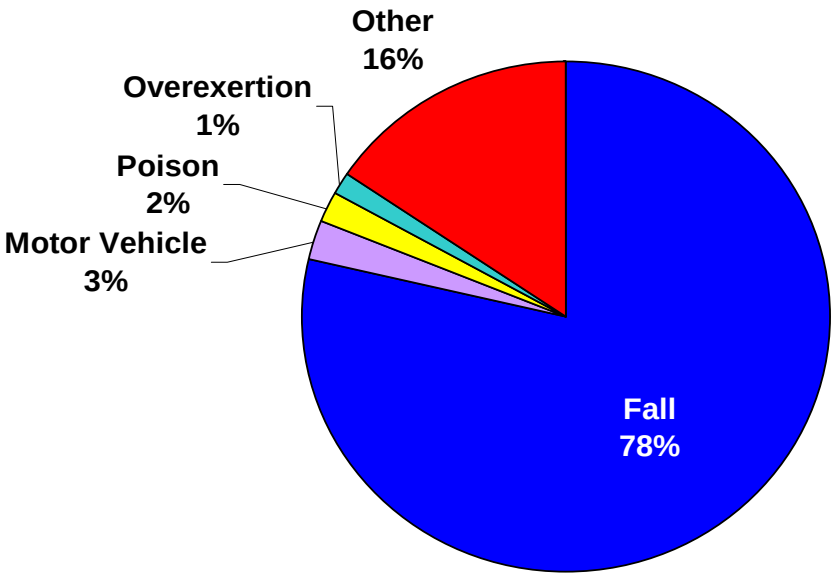
Unintentional Injuries among MA Residents Ages 65+, 2003

The vast majority of injuries among the elderly are unintentional or "accidental". Understanding the mechanisms or causes of these injuries is the first step in effective prevention. Falls are a common cause of unintentional injuries among the elderly. They occur following scenarios such as slipping and falling in one's home, falling out of bed, falling/tripping on stairs, falling during exercise, or falling in the bathtub. Motor vehicle crashes, choking, and pedestrian injuries are also common causes of injury among the elderly.

Unintentional Injury Data, MA Residents Ages 65+, 2003

- Among this population, nearly 85% (n=660) of the injury deaths, and over 95% of the injury-related hospitalizations (n= 23,128) and ED visits (n=67,150) were classified as resulting from unintentional injuries.
- Falls were the leading cause of unintentional injury death, hospitalization, and ED discharges among elders in 2003.
    - Unintentional falls caused 28% (n=188) of injury deaths, 78% (n=18,163) of injury-related hospitalizations, and 55% (n=36,799) of injury-related ED discharges.
- Other causes of unintentional injury deaths and hospitalizations in this population include motor vehicle crashes, suffocation and choking, pedestrian injuries and poisoning, among others. The distribution of causes of unintentional injury-related hospitalizations is presented in Figure 2.

Figure 2. Leading Causes of Unintentional Injury-related Hospitalizations MA Residents 65+, 2003 (N=23,128)



Source: MA Hospital Discharge Database, MA Division of Health Care Finance and Policy.

Intentional Injuries among MA Residents Ages 65+, 2003

Intentional injuries such as homicides/assaults and suicides/self-inflicted injuries, are less common than unintentional injuries, but they are important and often overlooked among the elderly. Due to stigma associated with suicide, the numbers of these injuries may represent a substantial undercount.

Intentional Injury Data, MA Residents Ages 65+, 2003

- In 2003, there were 60 suicides among residents ages 65 and over. Elderly men, ages 65+, had higher rates of suicide completion and hospitalization for self-injury than did women in this age group.
    - Firearms were the leading method used by the elderly to complete a suicide and caused 27 (45%) of all suicides in this population in 2003.
    - Poisons, including medications, carbon monoxide, and other agents, were the leading cause (78%, n=109) of the hospitalizations for non-fatal self-inflicted injuries in this population.
- Although MA-specific data is not available, it is estimated that between 1 and 2 million Americans age 65 and older have been injured, exploited or otherwise mistreated by someone on whom they depended for care or protection.[1]

Prevention:

INJURIES CAN USUALLY BE PREVENTED! Elders, their caregivers, community groups, medical providers, and public and private agencies can work together to reduce the frequency of these events. Effective injury prevention requires a multi-faceted approach including environmental modifications, enabling policies, quality medical care, and behavioral changes.

Fall Prevention Strategies[2]:

How can seniors reduce their risk of falling?

Researchers have identified a number of modifiable risk factors:

- Lower body weakness (Graafmans 1996)
- Problems with walking and balance (Graafmans 1996; AGS 2001)
- Taking four or more medications or any psychoactive medications (Tinetti 1989; Ray 1990; Lord 1993; Cumming 1998).

Seniors can modify these risk factors by:

- Increasing lower body strength and improving balance through regular physical activity (Judge 1993; Lord 1993; Campbell 1999). Tai Chi is one type of exercise program that has been shown to be very effective (Wolf 1996; Li 2005).
- Asking their doctor or pharmacist to review all their medicines (both prescription and over-the-counter) to reduce side effects and interactions. It may be possible to reduce the number of medications used, particularly tranquilizers, sleeping pills, and anti-anxiety drugs (Ray 1990).

Studies have also shown that some other important fall risk factors inlcude Parkinson's Disease, history of stroke, arthritis (Dolinis 1997), cognitive impairment (Tromp 2001), and visual impairments (Dolinis 1997; Ivers 1998; Lord 2001). To reduce these risks, seniors should see a

health care provider regularly for chronic conditions, and have an eye doctor check their vision at least once a year.

What other things may help reduce fall risk?

One-half to two-thirds of all falls occur in or around the home (Nevitt 1989; Wilkins 1999). Most fall injuries are caused by falls on the same level (not from falling down stairs) and from a standing height (for example, by tripping while walking) (Ellis 2001). Therefore, it makes sense to reduce home hazards and make living areas safer.

Researchers have found that simply modifying the home does not reduce falls. However, environmental risk factors may play a role in about half of all home falls (Nevitt 1989). Common environmental fall hazards include tripping hazards, lack of stair railings or grab bars, slippery surfaces, unstable furniture, and poor lighting (Northridge 1995; Connell 1996; Gill 1999).

To make living areas safer, seniors should:

- Remove tripping hazards such as throw rugs and clutter in walkways;
- Use non-slip mats in the bathtub and on shower floors;
- Have grab bars put in next to the toilet and in the tub or shower;
- Have handrails put in on both sides of stairways; and
- Improve lighting throughout the home.

Motor Vehicle Safety Strategies:

- There are national efforts promoting increasing the size and illumination of automobile instrument panel dials and road signs for better night-time readability.
- Elders and their families should use seat belts and take advantage of elder driver education programs.
- Providers should learn more about how to discuss and prepare for ending of driving limitations with elders and their families.

Suicide Prevention Strategies:

- Know the signs of depression, e.g., unusual appetite patterns, disturbed sleep, lack of pleasure in formerly pleasurable activities, extreme sadness, lack of energy. Depression is NOT an inevitable part of aging. It is a treatable disease.
- Depression screening can be requested from medical doctors, nurses, intake workers, social workers, and other community providers.
- Firearms and other weapons should be stored in a secure location, away from easy access.
- It is a myth that “people who talk about suicide don’t act”. More than half of all suicides are completed by people who have given a direct or indirect indication of their intent. Take all such communications seriously. Know the counseling and treatment resources in your community.
- Suicide is the act of a desperate person trying to escape unbearable psychological pain. You can help save a life by listening to them and then seeing that they receive professional help.
- Sponsor a Suicide Prevention Workshop for elder caregivers.

Additional Information and Resources:

Office of Elder Health
Massachusetts Department of Public Health
250 Washington Street, 4th Floor
Boston, MA 02108
Tel. (617) 624-5070

Injury Surveillance Program
Massachusetts Department of Public Health
250 Washington Street, 6th Floor
Boston, MA 02108
Tel. (617) 624-5648

Division of Violence and Injury Prevention Program
Massachusetts Department of Public Health
250 Washington Street, 4th Floor
Boston, MA 02108
Tel. (617) 624-5413

Massachusetts Suicide Prevention Program
Massachusetts Department of Public Health
250 Washington Street, 4th Floor
Boston, MA 02108
Tel. (617) 624-5476

Footnotes:

1. Elder Mistreatment: Abuse, Neglect and Exploitation in an Aging America, 2003. Washington, DC: National Research Council Panel to Review Risk and Prevalence of Elder Abuse and Neglect.
2. Fall prevention strategies (and associated references) adapted from: http://www.cdc.gov/ncipc/factsheets/falls.htm. Accessed 9/16/05.

Method Notes:

Data Sources:
MA Deaths: All Massachusetts death data presented is from death certificate data from the Registry of Vital Records and Statistics, MA Department of Public Health. Data reported are for calendar years.
Acute Care Hospitalizations: MA Hospital Discharge Database, MA Division of Health Care Finance and Policy; data reported represent a fiscal year October 1, 2002 - September 30, 2003. Deaths occurring during the hospital stay and transfers to another acute care facility were excluded.
Emergency Department Discharges at Acute Care Hospitals: MA Emergency Department Discharge Database, MA Division of Health Care Finance and Policy. Data reported represent a fiscal year October 1, 2002 - September 30, 2003. Deaths occurring during the ED visit were excluded.
Population Data: Population numbers used to calculate rates were 2003 estimates provided by the U.S. Census Bureau.

Rates: All rates are per 100,000 residents and represent crude rates unless otherwise indicated.
Case Ascertainment and Definitions: Cases were identified based upon International Classification of Disease (ICD) and grouped according to guidelines recommended by the Centers for Disease Control and Prevention. The motor-vehicle injury data detailed in this brief includes occupants and unspecified persons only. All analyses, unless otherwise specified, were performed by the staff of the Injury Prevention and Control Program and the Injury Surveillance Program. Detailed case definitions are available by contacting the author.